The Claims

What is claimed is:

1. A skin extract for protection against inflammatory processes and noxious stimuli comprising factors isolated from skin of an animal that has been initially exposed to a burn and further exposed to iodine.

2. The skin extract of claim 1, wherein the factors are one or more peptides extracted from the skin by an alcohol.

3. The skin extract of claim 1, wherein the noxious stimuli are selected from the group consisting of heat stimuli, cold stimuli, chemical stimuli, electric stimuli, ultraviolet irradiation, ionizing and non-ionizing irradiation, and ultrasound.

4. The skin extract of claim 1, wherein the inflammatory processes are involved in a disease or condition selected from the group consisting of autoimmune diseases, chronic inflammatory diseases and chronic degenerative diseases.

5. The skin extract of claim 4, wherein the disease or condition is selected from the group consisting of psoriasis, systemic lupus erythematosus (SLE), multiple sclerosis, inflammatory bowel disease including Crohn's disease, arthritis including rheumatoid arthritis, asthma, amyotrophic lateral sclerosis, Parkinson's disease, Alzheimer's disease, muscular dystrophy, sepsis, malignant or benign tumors.

6. The skin extract of claim 2, further comprising at least one protease inhibitor in an amount sufficient to prevent peptide degradation.

7. The skin extract of claim 1, wherein the skin is from a mammal.

8. A pharmaceutical composition for protection against or treatment of inflammation or inflammation-related diseases and noxious stimuli, comprising as an active ingredient the skin extract of claim 1, and a pharmaceutically acceptable diluent or excipient.

9. The pharmaceutical composition of claim 8, wherein the skin extract comprises one or more peptides.

10. The pharmaceutical composition of claim 9, wherein the peptide is selected from the group consisting of:

H-Lys-Gly-Asn-Tyr-Ala-Glu-Arg-Ileu-Ala-OH (SEQ ID NO: 1);

H-Asp-Thr-Glu-Phe-Glu-Ala-Ala-Gly-Gly-Gly-Val-Arg-OH (SEQ ID NO:2);

H-Thr-Thr-Asp-Thr-Glu-Phe-Glu-Ala-Ala-Gly-Gly-Gly-Val-Arg-OH (SEQ ID NO:4);

H-Lys-Gly-Asn-Tyr-MeAla-Glu-Arg-Ileu-Ala-OH (SEQ ID NO: *5);*

H-Lys-Gly-Asn-Tyr-Ala-Glu-Arg-MeIleu-Ala-OH (SEQ 1D NO:6);

H-Lys-MeGly-Asn-Tyr-Ala-Glu-Arg-Jleu-Ala-OH (SEQ ID NO:7);

H-Lys-MeGIy-Asn-Tyr-Ala-Glu-Arg-Melleu-Ala-OR (SEQ ID NO: 8);

H-Lys-Gly-His-Tyr-Ala-Glu-Arg-Val-Gly-OH (SEQ ID NO: 10)

H-Ala-Asp-Ser-Gly-Glu-Gly-Asp-Phe-Leu-Ala-Glu-Gly-Gly-Gly-Val-OH (SEQ ID NO:l1)

H-Lys-Gly-Asn-Tyr-Ala-Glu-Arg-Val-Gly-OH (SEQ ID NO: 12)

H-Lys-Ala-His-Tyr-Ser-Glu-Arg-Val-Gly-OH (SEQ ID NO: 13)

H-Lys-Ser-Arg-Thr-Thr-Ser-His-Gly-Arg-Val-Gly-OH (SEQ ID NO: 14)

and their analogs, homologs or derivatives.

11. The pharmaceutical composition of claim 9, comprising a plurality of peptides.

12. The pharmaceutical composition of claim 10, comprising a plurality of peptides selected from SEQ ID NOS 1-14, and their analogs, homologs or derivatives.

13. The pharmaceutical composition of claim 9, further comprising at least one protease inhibitor present in an amount sufficient to prevent peptide degradation.

14. The pharmaceutical composition of claim 8, further comprising at least one additional anti-inflammatory agent.

15. The pharmaceutical composition of claim 14, wherein the additional anti-inflammatory agent is a chemokine modulator.

16. A method for protecting an individual against noxious stimuli and inflammatory processes which comprises administering to an individual in need of such treatment a therapeutically effective amount of the skin extract of claim 1.

17. The method of claim 16, wherein the extract is administered in a pharmaceutical composition that includes a pharmaceutically acceptable diluent or excipient.

18. The method of claim 16, wherein the skin extract is obtained by alcohol extraction.

19. The method of claim 16, wherein the noxious stimuli used to generate the factors are selected from the group consisting of heat stimuli, cold stimuli, chemical stimuli, electric stimuli, ultraviolet irradiation, ionizing and non-ionizing irradiation, and ultrasound.

20. The method of claim 16, wherein the inflammatory processes are involved in a disease or condition selected from the group consisting of autoimmune diseases and chronic degenerative diseases.

21. The method of claim 16, wherein the individual to be treated has a disease or condition selected from the group consisting of psoriasis, systemic lupus erythematosus (SLE), multiple sclerosis, inflammatory bowel disease including Crohn's disease, arthritis including rheumatoid arthritis, asthma, amyotrophic lateral sclerosis, Parkinson's disease, Alzheimer's disease, muscular dystrophy, sepsis, malignant and benign tumors.

22. The method of claim 16, wherein the extract is administered prior to onset of inflammation or exposure to the noxious stimulus.

23. The method of claim 16, wherein the extract is administered after onset of inflammation or exposure to the noxious stimulus.

24. The method of claim 16, wherein the extract is administered by parenteral injection.

25. The method of claim 24, wherein the injection is selected from the group consisting of intravenous, intramuscular, intradermal, intralesional, intrathecal and subcutaneous injections.

26. The method of claim 16, wherein the extract is administered via transdermal, oral, rectal, topical, nasal, inhalation and ocular modes of treatment.

27. A method for protecting an individual against noxious stimuli and inflammatory processes which comprises administering to an individual in need of such treatment a therapeutically effective amount of the pharmaceutical composition of claim 9.

28. The method of claim 27, wherein the peptide is selected from the group consisting of SEQ ID NOS 1-14, or an active fragment, derivative, analog or homolog thereof.

29. The method of claim 27, wherein the pharmaceutical composition comprises a plurality of peptides selected from the group consisting of SEQ ID NOS 1-14 or an active fragment, derivative, analog or homolog thereof.

30. The method of claim 27, wherein the pharmaceutical composition further comprises at least one protease inhibitor present in an amount sufficient to prevent peptide degradation.

31. A method for preparing a pharmaceutical composition for protection against inflammatory processes and noxious stimuli which comprises initially exposing an animal to a burn to generate burned skin; further exposing the burned skin to iodine alone or in a solution with povidone; obtaining a skin extract by alcohol extraction of the treated burned skin; and isolating factors from the extract for use as an active agent in the pharmaceutical composition.

32. A pharmaceutical composition produced by the method of claim 31 and including and a pharmaceutically acceptable diluent or excipient.

33. The pharmaceutical composition of claim 32, wherein the factors are one or more peptides.

34. The pharmaceutical composition of claim 33, wherein the peptide is selected from the group consisting of:

H-Lys-Gly-Asn-Tyr-Ala-Glu-Arg-Ileu-Ala-OH (SEQ ID NO: 1);

H-Asp-Thr-Glu-Phe-Glu-Ala-Ala-Gly-Gly-Gly-Val-Arg-OH (SEQ ID NO:2);

H-Thr-Thr-Asp-Thr-Glu-Phe-Glu-Ala-Ala-Gly-Gly-Gly-Val-Arg-OH (SEQ ID NO:4);

H-Lys-Gly-Asn-Tyr-MeAla-Glu-Arg-Ileu-Ala-OH (SEQ ID NO: *5);*

H-Lys-Gly-Asn-Tyr-Ala-Glu-Arg-MeIleu-Ala-OH (SEQ 1D NO:6);

H-Lys-MeGly-Asn-Tyr-Ala-Glu-Arg-Jleu-Ala-OH (SEQ ID NO:7);

H-Lys-MeGIy-Asn-Tyr-Ala-Glu-Arg-Melleu-Ala-OR (SEQ ID NO: 8);

H-Lys-Gly-His-Tyr-Ala-Glu-Arg-Val-Gly-OH (SEQ ID NO: 10)

H-Ala-Asp-Ser-Gly-Glu-Gly-Asp-Phe-Leu-Ala-Glu-Gly-Gly-Gly-Val-OH (SEQ ID NO:11)

H-Lys-Gly-Asn-Tyr-Ala-Glu-Arg-Val-Gly-OH (SEQ ID NO: 12)

H-Lys-Ala-His-Tyr-Ser-Glu-Arg-Val-Gly-OH (SEQ ID NO: 13)

H-Lys-Ser-Arg-Thr-Thr-Ser-His-Gly-Arg-Val-Gly-OH (SEQ ID NO: 14)

and their analogs, homologs or derivatives.

35. The pharmaceutical composition of claim 34, comprising a plurality of peptides selected from SEQ ID NOS 1-14, and their analogs, homologs or derivatives.